



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,281	06/10/2005	Thomas Kampschreur	NL02 1289 US	1836
65913	7590	03/14/2008	EXAMINER	
NXP, B.V. NXP INTELLECTUAL PROPERTY DEPARTMENT M/S41-SJ 1109 MCKAY DRIVE SAN JOSE, CA 95131			BARRY, ERIN P	
			ART UNIT	PAPER NUMBER
			1793	
			NOTIFICATION DATE	DELIVERY MODE
			03/14/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

Office Action Summary	Application No. 10/538,281	Applicant(s) KAMPSCHREUR ET AL.	
	Examiner ERIN P. BARRY	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see Remarks, filed 1/9/2008, with respect to the rejection(s) of claim(s) 1-9 under 102(b) and 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn for claims 1-12. However, upon further consideration, a new ground(s) of rejection is made with Ricketson et al. (5,307,978) in view of Sabyeying (6,062,459) for claims 1-12.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 3 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 3, 4 are indefinite because it is unclear what is meant by "*facing away from...*". For the purpose of examination, *facing away from* will be taken to mean away from the front end of the apparatus/away from the second clamp.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

Art Unit: 1793

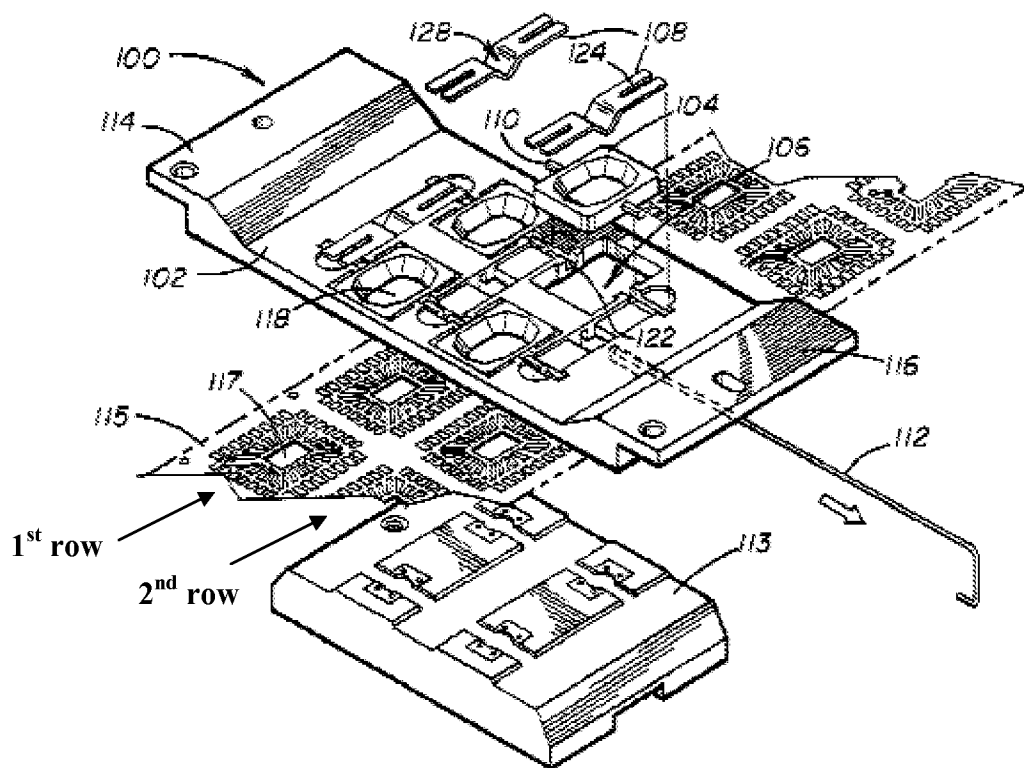
the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ricketson et al. (5,307,978) in view of Sabyeying (6,062,459).

Regarding claims 1 and 7, Ricketson et al. has a wirebonding apparatus for wirebonding a lead frames, which comprises a wirebonding frame 26 (i.e. platform), an indexing device for indexing the lead frame 10 in an index direction relative to the wirebonding frame (figure 2). There is a first, stationary clamp 33 (top) and 34 (bottom) in the index direction relative to the wirebonding frame 26 (figure 2 and column 4 lines 31-50). Ricketson et al. does not specifically state more than one row of lead frames. However, Sabyeying does have a stationary wire bonding clamp 100 for bonding two rows of lead frames 117 (figure 2). Ricketson et al. states that the Y table 19 can move in the Y direction (figure 2 and column 4 lines 31-38). Having the ability to move in the Y direction with a multiple lead frame clamp by Sabyeying would enable more than one row of lead frames to be used with the system. It would have been obvious at the time of the invention to use more than one row of lead frames to have a more time efficient wirebonding system.

Ricketson et al. also states a second clamp 40 (grippers on the indexing head 16) for indexing and clamping lead frames that is movable in the index direction to the wirebonding frame (figure 4). While Ricketson et al. doesn't mention the movable clamp clamping the second row of lead frames, it would be capable of doing so by use of the optical sensors 32 (figure 2) there by permitting the movable clamp to be located exactly

opposite any one of the bonding sites of the lead frame (column 5 lines 54-59). This wirebonding apparatus uses an automatic wire bonder to perform wirebonding operations at the bonding site 72. The wirebonding tool bonds the semiconductors that are gripped 40 and indexed by the indexing head 16 and brought to the stationary clamp (column 7 lines 8-16 and figure 2 and 4).



Regarding claim 2, Ricketson et al. states that lead frames are separated by a pitch, P (column 3 lines 38-40). Ricketson et al. does not state that the rows are separated by a pitch, P. However, it would have been obvious at the time of the invention to all lead frames evenly spaced from each other by a pitch, P to prevent misalignment when multiple rows are being clamped and to ensure enough space between each lead frame for wire bonding.

Regarding claim 3, Ricketson et al. does not state that there are multiple rows. However, Sabyeying does show two rows of lead frames. While Sabyeying only shows two rows of lead frames in figure 2, it is stated that there could be 8 or more openings to allow for more lead frames (column 4 lines 23-31). This would allow for multiple rows such as a further row of lead frames located on the side of the first row facing away from the second row of lead frames. It would have been obvious at the time of the invention to use multiple rows of lead frames because it will create a more time efficient system by being able to clamp and wirebond more than lead frame at a time.

Regarding claim 4, Ricketson et al. does not state that there are multiple rows. However, Sabyeying does show two rows of lead frames. While Sabyeying only shows two rows of lead frames in figure 2, it is stated that there could be 8 or more openings to allow for more lead frames (column 4 lines 23-31). This would allow for multiple rows such as further row of lead frames located on the side of the second row facing away from the first row of lead frames. It would have been obvious at the time of the invention to use multiple rows of lead frames because it will create a more time efficient system by being able to clamp and wirebond more than lead frame at a time.

Regarding claim 5 and 10, Ricketson et al. does not mention multiple rows of lead frames. However Sabyeying does have two rows of lead frames (figure 2). It would have been obvious at the time of the invention to use multiple/two rows of lead frames because it will create a more time efficient system by being able to clamp and wirebond more than lead frame at a time.

Regarding claim 6, Ricketson et al. states that the first clamp is stationary relative to the index direction (x-direction) (41-50).

Regarding claim 8, Ricketson et al. states that while the automatic wire bonder is performing bonding on the site, the gripping mechanism 40 releases the lead frame 10 from the bonding site 72 and repositions itself using the sensor 32 (column 7 lines 8-16 and figure 2 and 4).

Regarding claim 9, Ricketson et al. has the first clamp 33 and 34 that is situated opposite from the second clamp 40 (figures 2 and 4).

Regarding claim 11, this is a method of intended use for the apparatus. While intended use recitations cannot entirely be disregarded, in composition and article claims, the intended use must result in structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention over the prior art. It is in the position of the examiner that the prior art structure is capable of performing the intended use and therefore meets the instant claims.

Regarding claim 12, this is a method of intended use of the clamps for the apparatus. While intended use recitations cannot entirely be disregarded, in composition and article claims, the intended use must result in structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention over the prior art. It is in the position of the examiner that the prior art structure is capable of performing the intended use and therefore meets the instant claims.

Conclusion

Due to new grounds for rejection on claims 1-12, this action is **NON-FINAL**.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIN P. BARRY whose telephone number is (571)270-3634. The examiner can normally be reached on Monday through Thursday from 8am-5pm Eastern time. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EPB
2/25/2008

/M. Alexandra Elve/
Primary Examiner, Art Unit 1793

Application/Control Number: 10/538,281
Art Unit: 1793

Page 8